**A. Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the subject application, and please amend the claims as follows:

Claims 1-23 (Canceled)

Claim 24. (Currently amended): A system for the preparation and handling of multiple solid state samples~~, in particular~~ for spectroscopic and microscopic analysis, said system comprising:

[[-]] a sample holder assembly for multiple solid-state samples, said sample holder assembly comprising:

a sample holding body having first and second sides, provided with multiple sample receiving open-ended bores extending through said body between said first and second sides, each bore having a first opening at the first side and a second opening at the second side,

a closure body adapted to be mounted against the second side of the sample holding body, said closure body having a closure side adapted to rest against the second side of the sample holding body for closing off the second openings of the bores in said sample holding body,

[[-]] compacting means for compacting samples filled in bores of the sample holding body as these bores are closed off on the second side by the closure body, and

plugs, each of the plugs adapted to be introduced into one of the bores via the first opening,

wherein the plugs are support plugs associated with said sample holding assembly, each support plug being adapted to be secured with respect to said bore for supporting a sample in said bore during the spectroscopic or microscopic analysis such that all exposed surfaces of the samples lie in a single plane.

Claim 25. (Canceled)

Claim 26. (Currently amended): System according to claim 24 [[25]], wherein the plugs are also compaction plugs associated with said compaction means for compacting a sample in said bore.

Claim 27. (Canceled)

Claim 28. (Currently amended): System according to claim 24 [[25]], wherein the plugs are compacting and support plugs for compacting a sample in said bore and also adapted to be secured with respect to said bore for supporting the compacted sample in said bore.

Claim 29. (Currently amended): System according to claim 24 [[25]], wherein the plugs are slideable in the bores and the compacting means are adapted for pushing the plugs into the bores thereby compacting the samples.

Claim 30. (Currently amended): System according to claim 24 [[25]], wherein the plugs are diametrically expandable under axial compression such that the plugs allow for expansion and thereby fixation in said bores.

Claim 31. (Currently amended): System according to claim 24 [[25]], wherein the plugs and the bores are screwthreaded.

Claim 32. (Currently amended): System according to claim 24 [[25]], wherein the system further comprises securing means for securing the ~~a~~ plugs in the ~~a~~ bores~~, e.g. an adhesive~~.

Claim 33. (Currently amended): System according claim 24, ~~wherein the system comprises plugs each adapted to be introduced into a bore via the first opening, and~~ wherein the compacting means comprise a support removably fixed over the first side of the sample holding body, said support having screwthreaded holes aligned with the bores and provided with screws for pushing the plugs into the bores.

Claim 34. (Previously presented): System according to claim 24, wherein the second side of the sample holder has a planar surface and wherein the corresponding face of the closure body also has a planar surface.

Claim 35. (Previously presented): System according to claim 33, wherein the planar surface of the closure body is a mirror-quality surface.

Claim 36. (Previously presented): System according to claim 33, wherein the planar surface of the closure body is polished.

Claim 37. (Previously presented): System according to claim 33, wherein the planar surface of the closure body is one of the following materials: glass, ceramic, aluminumoxide, silicon, siliconcarbide, titaniumnitride.

Claim 38. (Previously presented): System according to claim 24, wherein the bores have a diameter less than 2 cm.

Claim 39. (Previously presented): System according to claim 24, wherein the hardness of the closure side of the closure body is greater than 6 Mohs.

Claim 40. (Currently amended): A method for preparing multiple samples~~, in particular~~ for spectroscopic and microscopic analysis, comprising:

providing ~~wherein use is made of~~ a system ~~according to claim 24~~ for the preparation and handling of multiple solid state samples for spectroscopic and microscopic analysis, said system comprising a sample holder assembly for multiple solid-state samples, said sample holder assembly comprising:

a sample holding body having first and second sides, provided with multiple sample receiving open-ended bores extending through said body between said first and second sides, each bore having a first opening at the first side and a second opening at the second side,

a closure body adapted to be mounted against the second side of the sample holding body, said closure body having a closure side adapted to rest against the second side of the sample holding body for closing off the second openings of the bores in said sample holding body,

compacting means for compacting samples filled in bores of the sample holding body as these bores are closed off on the second side by the closure body, and

plugs, each of the plugs adapted to be introduced into one of the bores via the first opening,

filing ~~and wherein~~ each sample ~~is filled~~ into one of the ~~a~~ bores via the first opening thereof, said bores being closed at the second side by the closure body, and

compacting ~~wherein~~ the samples ~~are compacted~~ using said compacting means, wherein the samples are supported by said support plugs such that during the spectroscopic or microscopic analysis all exposed surfaces of the samples lie in a single plane.

Claim 41. (Currently amended): A method according to claim 40, wherein a ~~the~~ thickness of the compacted samples is at least 100 micrometers~~, preferably at least 200 micrometers, most preferably at least 500 micrometers~~.

Claim 42. (Currently amended): A method according to claim 40, wherein a ~~the~~ thickness of the sample is measured.

Claim 43. (Currently amended): A method ~~for spectroscopic or microscopic analysis of multiple samples, wherein said samples are prepared in a sample holder using the method~~ according to claim 40, ~~and~~ wherein the closure body is removed from the second side of the sample holding body thereby exposing the corresponding surface of the samples, and then subjecting the samples to spectroscopic or microscopic analysis.

Claim 44. (Previously presented): A method according to claim 43, wherein the samples are subjected to a physical or chemical treatment prior to or during the samples to spectroscopic or microscopic analysis.

Claim 45. (Previously presented): A method according to claim 43, wherein the bores are open between the first opening and the sample so that also the surface of the samples directed towards the first side of the sample holder body are exposed, and subjecting the samples to a transmissive spectroscopic analysis.

Claim 46. (New): A system for the preparation and handling of multiple solid state samples for spectroscopic and microscopic analysis, said system comprising:

a sample holder assembly for multiple solid-state samples, said sample holder assembly comprising:

a sample holding body having first and second sides, provided with multiple sample receiving open-ended bores extending through said body between said first and second sides, each bore having a first opening at the first side and a second opening at the second side,

a closure body adapted to be mounted against the second side of the sample holding body, said closure body having a closure side adapted to rest against the second side of the sample holding body for closing off the second openings of the bores in said sample holding body, and

compacting means for compacting samples filled in bores of the sample holding body as these bores are closed off on the second side by the closure body, and

plugs, each of the adapted to be introduced into one of the bores via the first openings, wherein the plugs are support plugs associated with said sample holding assembly, each support plug being adapted to be secured with respect to said bore for supporting a sample in said bore during the spectroscopic or microscopic analysis such that all exposed surfaces of the samples lie in a single plane, and

wherein the compacting means comprise a support removably fixed over the first side of the sample holding body, said support having screwthreaded holes fixed over the first side of the sample holding body and aligned with the bores and provided with screws for pushing the plugs into the bores, and

wherein the second side of the sample holder has a planar surface and wherein the corresponding face of the closure body also has a planar surface, which planar surface is polished, is a mirror-quality surface, and is one of the following materials: glass, ceramic, aluminiumoxide, silicon, siliconcarbide, titaniumnitride.

Claim 47. (New): System according to claim 32, wherein the securing means comprise an adhesive.